# Bogdan Chuzhinov

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#### RESEARCH INTERESTS

Dynamical Systems in Biology, Computational Biology, Knot Theory

### **EDUCATION**

University of Vienna, Austria

Master's Program Mathematics (Specialization Biomathematics)

University of Vienna, Austria

Master's Program Bioinformatics

Yandex School of Data Analysis, Moscow, Russia

Data Science Program

Novosibirsk State University, Novosibirsk, Russia

Master of Science in Mathematics (Specialization Geometry and Topology) Thesis Title: Local Representations of Flat Virtual Braids by Automorphisms of Free Group (on Russian)

Novosibirsk State University, Novosibirsk, Russia

Bachelor of Science in Mathematics

ACADEMIC EXPERIENCE

Lecturer at the Department of Mathematics

The lectures were devoted to preparing graduates of a special school

at the university for additional entrance exams in mathematics at Moscow State University.

Laboratory of Topology and Dynamics, Novosibirsk State University

Special Educational Scientific Center of Novosibirsk State University

Laboratory assistant

# **PUBLICATIONS**

## Journal papers

Published

- Bardakov, V., Chuzhinov, B., Emelyanenkov, I., Ivanov, M., Kozlovskaya, T., & Leshkov, V. (2024). Set-Theoretical Solutions of the n-Simplex Equation. Siberian Advances in Mathematics, 34(1), 1-40.
- Chuzhinov, B., & Vesnin, A. (2023). Representations of Flat Virtual Braids by Automorphisms of Free Group. Symmetry, 15(8), 1538. https://doi.org/10.3390/sym15081538

March 2025 — Present

October 2024 — Present

September 2021 — (expected) May 2025

September 2021 — July 2023

Cumulative GPA: 5.00/5.00

September 2018 — July 2021 Cumulative GPA: 4.95/5.00

Novosibirsk, Russia September 2022 — July 2023

Novosibirsk, Russia August 2019 — December 2021

Bogdan Chuzhinov April 2025

## SELECTED COURSES

### Relevant Master's Courses

- Stochastic Processes (3 ECTS)
- Weak Solutions of Mathematical Physics Equations (3 ECTS)
- Geometric Analysis (3 ECTS)
- Quasiconformal Analysis (4 ECTS)
- Nonstandard Analysis (4 ECTS)
- Structures on Manifolds (4 ECTS)

#### **Additional Courses**

- Probability Theory (5 ECTS)
- Mathematical Statistics (4 ECTS)
- Riemannian Geometry (4 ECTS)
- Complex Analysis (6 ECTS)
- Functional Analysis (8 ECTS)

#### Relevant Bachelor's Courses

- Introduction in Nonlinear Dynamics (2 ECTS)
- Gas dynamics (3 ECTS)
- Hydrodynamics (3 ECTS)
- Ordinary Differential Equations (6 ECTS)
- Integrable System (4 ECTS)
- Theoretical Mechanics (7 ECTS)
- Equations of Mathematical Physics (8 ECTS)
- Analysis (28 ECTS)

### Courses of Yandex School of Data Analysis

- Bayesian Methods in Machine Learning
- Algorithms and Data Structures
- Machine Learning (including CV and NLP)
- Programming in Python
- Programming in Golang

### LANGUAGES

Russian: Native English: B2 German: C1

## **SKILLS**

- Programming: Python (including NumPy, Pandas, Scikit-learn, Matplotlib, SciPy, PyTorch), C/C++ (basic).
- Databases: PostgreSQL, MongoDB.
- Scientific Computations: MATLAB, R.
- Software: Linux (including Bash-Scripting, Vim), Git, Latex, Docker.
- Web Technologies: Hugo, Astro.
- Soft Skills: Organization, Multitasking, Patience.

### REFERENCES

## Dr. Andrei Vesnin, Corresponding Member of the Russian Academy of Sciences

Chief Researcher at Sobolev Institute of Mathematics, Professor at Novosibirsk State University, Novosibirsk, Russia

E-mail: vesnin@math.nsc.ru Scholar Profiles: Google Scholar

## Dr. Valeriy Bardakov

Chief Researcher at Sobolev Institute of Mathematics, Professor at Novosibirsk State University, Novosibirsk, Russia

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